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(54) **DATA ENCRYPTION TECHNIQUES**

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(57) **ABSTRACT**

System and methods for encrypting data, such as plaintext or binary data, on electronic devices are described. An electronic device can encrypt the data by receiving a string of one or more characters associated with the data to be encrypted, determining an entropy for an encrypted string, determining a position for each character of the one or more characters, generating an encrypted string for each character using the determined entropy and position of the respective character, and generating an encrypted message by concatenating the encrypted strings of the one or more characters together. In some examples, the electronic device encrypts the data using one or more pseudo-random number generators. In some examples, the electronic device can offset the one or more characters before the encrypting and/or offset characters in the encrypted strings after the encrypting. The electronic device can then send the encrypted message to another electronic device for decrypting.